D51A – ISSC CWS/CMS Service Level Agreement

Version 6C
February 14, 1997

Service Level Agreement

State of California
and
Integrated Systems Solutions Corporation
For the period 12/31/96 to 06/31/97

Agreed to by:

_____ _____

Cris Jensen **Date**

Project Director

State of California

_____ _____

Larry Longseth **Date**

NetWorkStation Management/Distributed System Management Manager

ISSC

_____ _____

Robert Payne **Date**

Project Executive, CMS/CWS

ISSC

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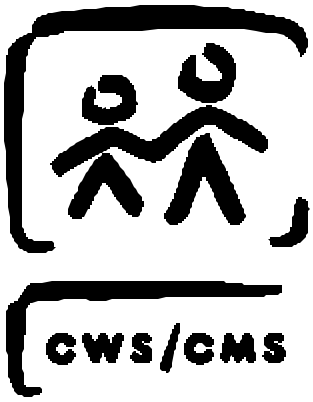
I. Introduction



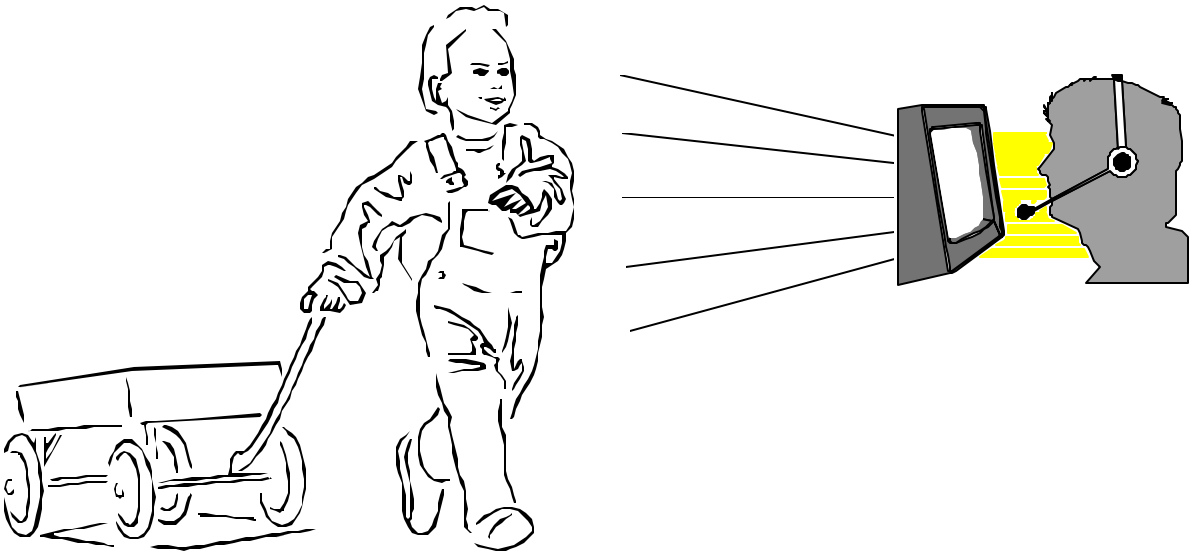
1. Introduction

This Service Level Agreement (SLA) represents a commitment between the Health and Welfare Data Center (HWDC), the California Department of Social Services (CDSS), the counties, and Integrated Systems Solutions Corporation (ISSC) to ensure the success of the Child Welfare Services/Case Management System (CWS/CMS) Project.

While this SLA is based on contract and technical requirements, it is recognized that only the dedicated team efforts of the participating organizations will ensure the overall success of the project. In support of this objective, the SLA clarifies team roles and ongoing deliverables, establishes measurement sets to provide key indicators of the success of the CWS/CMS project, and brings into focus the tasks expected of all concerned.

Although the initial installation of the CWS/CMS application is to support the caseworkers of the Child Welfare Services Program, ongoing support looks beyond the system to serving the children of the State of California. To this end, HWDC, the counties, CDSS, and ISSC will work together to achieve project and system performance to the highest standards.

While the stated goal of this document is to provide the blueprint for technically excellent service to the State of California CWS/CMS Counties, the major accomplishment will be the contributions to the care and welfare of our ultimate customer - the children and families of the State of California.



1.1. SLA Components

This SLA defines four areas of service, their respective service-level objectives, and the timeline for reporting against these objectives.

The four service areas are:

- Customer Support (Help Desk)
- System Availability
- System Response Time
- Problem Resolution

By measuring the performance of these service components and employing continuous process improvement, the HWDC, CDSS, counties, and ISSC will be able to ensure the success of the CWS/CMS Project and customer satisfaction.

Customer Support is the help desk that receives problem calls and manages problems through resolution. The customer support service-level objectives will be developed during the initial 90-180 days of Release 2 production.

System Availability measures the CWS/CMS application availability on the workstation, server, and host environments. The service-level objectives are 99.0%, 99.0%, and 98.5% respectively.

System Response Time measures the CWS/CMS application response time. The service-level objectives are 2.4 seconds for small transactions, 7.0 seconds for medium transactions, 25.0 seconds for large transactions, and 52.0 seconds for very large transactions.
Problem Resolution measures the problems recorded by the ISSC Help Desk on the project along with the required resolution time for those problems. Problems are categorized by severity. Severity 1 problems require resolution within 1 day, Severity 2 within 2 days, Severity 3 within 14 days, and all others within 30 days. All days include weekends and holidays.
Formal reporting will begin after February, the first full month of Release 2 Production.
All reports and reporting processes will be reviewed on a monthly basis to address and improve the usability by all partners. Customer support reports will be developed first to support office automation production activities. Reports on additional service areas and reports derived from Rider H of the contract will be assessed and developed during monthly reviews of the SLA.
The time periods for Release 2 field test and pilot are:

- Release 2 field test (9/16/96 - 12/6/96) is a functional test of the application at two county locations (Santa Clara and Los Angeles).
- Pilot for Release 2 (12/9/96 - 1/27/96) is to verify the production readiness of the Release 2 system.

1.2. SLA Document Review and Change Procedures

After initial agreement, this SLA will remain in effect until replaced with a written (hard copy) updated version. This document will be reviewed after six months during the Release 2 time period and after the initial agreement is signed to ensure the goals of the project are being met. Subsequent reviews will continue every six months through November 1997 and will occur annually thereafter.

1.3. Document Communications

During the term of this SLA, the following State and ISSC Management are responsible for SLA implementation and the negotiation process. Management may mutually agree upon different or additional SLA Performance Standards and amend the agreement in writing accordingly.

State of California

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Cris Jensen	Project Director, State of California CWS/CMS Project	Telephone: (916) 263-1103

Integrated Systems Solution Corporation (ISSC)

Name	Title	Phone Number
Robert Payne	Project Executive, State of California CWS/CMS Project	Telephone: 916-567-2900 Pager: 1-800-838-4495
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1.4. Definitions

The following definitions apply:

1. ACD: Automatic Call Distribution is a computerized system that maximizes high-volume telephone call handling.
2. Actual Downtime: of the scheduled hours, the aggregate number of hours in any month during which the application is actually unavailable for use by the end users. Unavailability will be attributed to the host, server, or workstation.
3. Actual uptime: of the scheduled hours, the aggregate number of hours in any month during which the application is actually available for use by the end users.
4. Application: CWS/CMS Release 1 (Base System), 2 (ADR/TSS), and 3 (Adoptions).
5. Availability: the percentage of time the system performs to a defined level of service within a specific environment over a specific-time interval.
   The contract further defines "percent availability" as (UT/(UT + DT) * 100).
   To determine whether ISSC's performance meets availability performance standards, ISSC's availability performance will be reported on a monthly basis and calculated once a month (within fifteen business days following the end of each calendar month).
6. Co-existent county: counties that are responsible for the administration of the configuration and support of the workstations. The ISSC CWS/CMS Help Desk in Boulder has primary responsibility for the CWS/CMS application and is secondary to the county help desk for all other activities. The co-existent county will have the following support from ISSC:

   A) LAN management on the server

   B) Software distribution to the server

   C) Help desk support for:

      1) NWS Operations: levels 2, and 3 (server only)

      2) CWS/CMS Microsoft Word Templates: levels 2 and 3

      3) CWS/CMS application: levels 1, 2, and 3

   D) Hardware maintenance: administration and implementation

   E) Move, Add, and Change requests (billable)

   F) Printer administration

7. DCAF: Distributed Access Console Facility provides a remote-console function that allows one workstation (the controller) to control the keyboard and mouse input and monitor the display output of another workstation (the target).
8. Dedicated county: counties where the configuration, hardware, and software support to the workstations are the responsibility of ISSC. The dedicated counties will have the following support from ISSC:

   A) Local Area Network (LAN) management to server and workstations

   B) Software distribution to server and workstations

   C) Help desk support for:

      1) NWS Operations: levels 1, 2, and 3

2) CWS/CMS Microsoft Word Templates: levels 2 and 3

3) CWS/CMS application: levels 1, 2, and 3

D) Hardware maintenance: administration and implementation

E) Move, Add, and Change requests (billable)

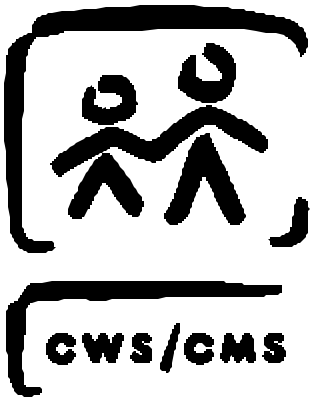
F) Printer administration

9. Defect: a hardware or software deficiency that prevents the component from functioning as designed.
10. DPU or DP Umbrella: Data Processing Umbrella is Vycor Corporation's problem-management system and currently is being used on the State of California CWS/CMS Project.
11. Excusable downtime (DT): The aggregate number of hours in any month during which downtime is caused or requested by either the state, counties, or HWDC.
12. Host system: ISSC Boulder Data Center machines and related systems software.
13. OA: Office Automation includes the hardware and OA software, the Local Area Network (LAN), Wide Area Network (WAN), ISSC CWS/CMS Help Desk, E-Mail Administration procedures, and the applicable NetWorkStation (NWS) components of CWS/CMS.
14. Prime time: prime time is 8:00 AM to 5:00 PM (PT), Monday through Friday, including holidays. Non-prime is all other time.
15. Response Time: the time from the end-user's perspective that elapses from pressing the Enter key until a response is displayed on the monitor. Reporting of the CWS/CMS end-user response time is based on start-to-finish elapsed time for each of four categories: small, medium, large, and very large that are explained in Sections IV and XI.
16. Scheduled hours: the days of the week and hours per day that each SLA component is scheduled for use by the end user.
17. Scheduled uptime (UT): the aggregate number of hours in any month during which the application is scheduled to be available for use by the end users.
18. Service level: The degree of support provided to the end user by the Help Desk through a single, toll-free telephone number. Three levels of support are defined for the State of California (SOC) in section 2.1, "Service Defined."
19. Service level objectives: The level of service to be provided by the end of Release 2 Pilot in Santa Clara County as summarized in the following tables:
    - Section 2, "ISSC CWS/CMS Help Desk Schedule," Table 1, p.2-2
    - Section 2, "SLA ISSC CWS/CMS Help Desk Number of Calls," Table 2, p. 2-3
    - Section 3, "Systems Availability Percentages," Table 4, p.3-1
    - Section 4, "CWS/CMS Response-Time Standards from 1/27/97 to 1/23/99," Table 7, p.4-3
    - Section 5, "Systems Problem Severity Table," Table 8, p. 5-1
20. Ticket: The Problem Management System on-line report that is filled out when a user calls in a problem to the help desk. Each ticket is assigned a unique problem number.
21. Weekly peak hour: The highest hour of usage by transaction volume in a week.
22. Workstation configuration in co-existent county: applications and operating systems including Windows for Workgroups 3.11, DOS 7.0, PCOM3270, Microsoft Mail, Microsoft Word, DCAF, and the CWS/CMS application will be on the server. It is the county's responsibility to load the workstation software from the server.
23. Workstation configuration in dedicated county: Windows for Workgroups 3.11, DOS 7.0, PCOM3270, Microsoft Mail, Microsoft Word, DCAF, and the CWS/CMS Application. Dedicated county workstations

must not be changed from this configuration. If the county changes a workstation, ISSC will change the workstation back to the base configuration or ISSC will no longer be responsible for support of that workstation. This workstation will no longer be a part of the base number of workstations. The process will include the following steps by the ISSC Help Desk:

- Upon discovering a workstation image has been changed, record this as a problem.
- With customer concurrence, change workstation back to the original or currently approved image profile.
- If customer fails to concur, support for this workstation will no longer be provided. Status for this workstation will be recorded in the DP Umbrella as an "Out-of-Scope" workstation. All out-of-scope workstation support is considered billable.

II. Dedicated Counties Customer Support (ISSC Help Desk)



2. Dedicated Counties Customer Support (ISSC Help Desk)

2.1. Service Defined

Customer support provides help desk services for the CWS/CMS application, the mainframe system, associated hardware and software, LAN support, WAN support, and hardware maintenance and service coordination with the approved maintenance and service vendors. Service also includes workstation and printer support.
Support will be provided to the end user through a single, toll-free telephone number connected to the ISSC CWS/CMS Help Desk and delivered in three levels.

- Level one support provides initial problem determination, problem logging and tracking, and problem resolution.
- Level two support provides in-depth problem determination, problem source identification, and problem resolution.
- Level three support provides final resolution on defects.

Any questions or concerns with the customer support section of this SLA should first be addressed by referring to the *ISSC CWS/CMS Help Desk Roles, Responsibilities, and Process Guide* that covers areas beyond the scope of the SLA.

2.2. Service Level Objective

ISSC will record the number of calls to the ISSC CWS/CMS Help Desk during the initial 90 - 180 days of R2 production (May 5, 1997 - August 3, 1997). The state and ISSC executive management then will mutually agree to an ISSC CWS/CMS Help Desk baseline for the contract volumes plus level purchased above baseline by counties. The baseline for off-shift will be calculated at 15% of the agreed prime shift baseline volume.
One issue to consider when determining the call baseline is the number of calls required to resolve the previously opened tickets.

2.2.1. Customer Support Service Hours

The ISSC CWS/CMS Help Desk will be operational and provide service according to the following project milestones:

Project Milestones	Dates	Service Schedules
1. OA production to ADR/TSS Release 2	1/15/96 - 1/27/97	Mon-Fri, 8 AM-5 PM[2,]
2. ADR/TSS Release 2	1/27/97 - 30 days after last installation	Mon-Sun, 24 Hours
3. CWS/CMS Ops. & Maint. (R2)	30 days after last installation - 1/23/99	Mon-Fri, 7 AM-7 PM Sat, Sun, Holiday, noon-midnight

Table 1: ISSC CWS/CMS Help Desk Schedule

Notes: 1. All times given as Pacific Time (PT), whether Standard or Daylight Savings.
2. Off-shift hours support will respond within one hour of receiving a page.

2.3. Service Level Measurement

Resource usage for this category will be measured as the aggregate number of ISSC Help Desk incoming calls during the applicable measurement period necessary to handle end-user calls and referrals. ISSC CWS/CMS Help Desk calls will be measured using a call answering/monitoring system.

One call for assistance, whether by electronic or voice entry, into the ISSC CWS/CMS Help Desk (excluding calls to the systems status recording) equals one Resource Unit (RU). Baseline call volume will be based on the number of RUs during an initial specified period as defined in the contract. Calls, however, resulting from ISSC's failure to update any required "Systems Status" messages pursuant to contract requirements will not be included when calculating the monthly ISSC CWS/CMS Help Desk resource usage. [1]The "System Status" message will include information on the status of the network, host, and related ISSC responsible application software. Calls resulting from ISSC-caused failure should not be charged back to the counties.

[1] Issue - Open - Warranty v. application calls and duplicate calls should be excluded from the baseline count. Warranty issue is still being discussed with regards to being charged for help desk calls that result from issues or problems resulting from hardware supplied by ISSC.

2.3.1. ISSC CWS/CMS Help Desk Baseline Call Volumes

ISSC CWS/CMS Help Desk will provide service according to the following volume table:

ISSC CWS/CMS Help Desk Baseline Call Volume (Total)	Help Desk Number of Calls Prime	Help Desk Number of Calls Non-Prime
TBD	TBD	TBD

Table 2: SLA ISSC CWS/CMS Help Desk Number of Calls

Measurements defined in paragraphs 2.3.2 - 2.3.4 are supplementary measurements for management use in trends analysis.

2.3.2. ISSC CWS/CMS Help Desk Baseline Call Hold Time

ISSC CWS/CMS Help Desk will provide service according to the following volume table. This table is for average wait time for both prime and non-prime hours.

ISSC CWS/CMS Help Desk Baseline Call Avg Wait Time	Objective % of Help Desk Calls Answered < 3Mins	Actual % of Help Desk Calls Answered < 3 Mins
% of calls answered < 3 minutes	100%	%

Table 3: SLA ISSC CWS/CMS Help Desk Percent of Call Wait Time

2.3.3. ISSC CWS/CMS Help Desk Baseline Call Resolve Rate

ISSC CWS/CMS Help Desk will provide service according to the following volume table for resolve rate. The overall percentages will be calculated from non-dispatchable type calls (hardware calls will not be included):

Help Desk Percent of Resolved First Calls: Objective	Help Desk Number of Resolved First Calls: Actual	Delta Change from Last Month
80%	%	

Table 4: SLA ISSC CWS/CMS Help Desk Calls Fixed the First Time

2.3.4. ISSC CWS/CMS Help Desk Baseline Call Abandoned Rate

ISSC CWS/CMS Help Desk will provide service according to the following volume table:

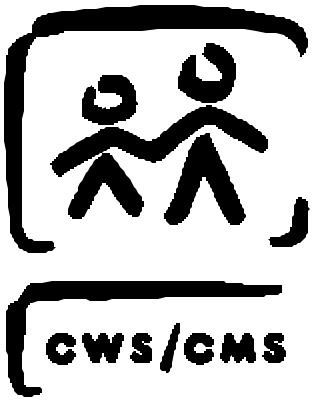
Percentage of Help Desk Calls Abandoned: Objective	Percentage of Help Desk Calls Abandoned: Actual
less than 8%	

Table 5: SLA ISSC CWS/CMS Help Desk Percent of Calls Abandoned

2.4. Service Level Reporting

Customer and ISSC call and problem-management statistical reports will be generated by ISSC that will measure the ISSC CWS/CMS Help Desk hours and call volume metrics. Statistical reports will be generated for each of the dedicated counties and CDSS for Precent of Resolved First Call. Exact format and design will be defined during the initial reporting period.

III. Dedicated Counties System Availability



3. Dedicated Counties System Availability

3.1. Service Defined

Caseworkers in the State of California need to have the complete CWS/CMS system available to them so they can do their job. Our job as a team is to see that the various elements of the system are available to the caseworkers. ISSC, the HWDC, and the counties each share in the ownership and subsequent responsibility of these pieces as reflected by areas of expertise discussed in this section. The methods and tools for measuring performance also are addressed.

ISSC is responsible for servicing and maintaining compliance with availability measurement and management requirements related to CWS/CMS application components of the host, servers, LANs, workstations, and printers. Managing the availability of the Wide Area Network (WAN) and the equipment at county sites relating to the WAN is the responsibility of HWDC and the counties.

The county will manage all physical aspects of availability related to the operation of printers attached to their CWS/CMS LANs and all functions related to E-Mail administration. ISSC will manage printer queues.

The physical aspects of printers managed by the counties include:

- Supply and load suitable printer paper
- Clear paper jams
- Manage out-of-paper conditions
- Reconnect cable disconnects
- Replace toner cartridges as needed
- Ensure power switch "ON"

3.1.1. System Availability During Conversion

Conversion is the process of converting the database from SB/CWS (San Bernardino Child Welfare System), LA CIS (Los Angeles Children Information System), SSRS (Social Services Reporting System), and FCIS (Foster Care Information System) to Release 2 application code. Conversion will begin January 24, 1997, with each conversion period scheduled for a 72-hour period centered on weekends. Each conversion period may include more than one county and more than one database.

For each database conversion period, it is expected to require 2-3 hours. During this time, all counties associated with this database will be affected. During a conversion period, counties in the process of being converted will have read-only access to the affected database during the 2-3 hour actual conversion period plus the period of time required to read and transport the database from the county to the ISSC data center. The total time of read-only access for counties being converted is expected to span approximately 24 hours.

Counties that have been previously converted to CWS/CMS will have update access to the CWS/CMS database being converted except for the 2-3 hour actual conversion period of the follow-on counties. During this time, previously-converted counties will have read-only access. The conversion time will not be considered outage time but will be considered to be available for conversion.

FCIS for Release 1 at Glenn County will be converted at the start of base system production. Data for the rest of Glenn County will be converted prior to 01/17/97 and the start of Release 2.

The schedule for conversions will be published in advance and affected counties will be notified. The objective of conversion is to have the system available by 8:00 AM Monday morning.

3.2. Service-Level Objective

3.2.1. Systems Availability Standards

Service-level objectives for system availability for dedicated counties are:

CWS/CMS Environment	System Availability	Read-Only Availability
Host application	98.5%	99.0%
LAN servers	99.0%	Not applicable
Workstations	99.0%	Not applicable

Table 6: Systems Availability Percentages

3.3. Service Level Measurement

3.3.1. Host-System-Availability Measurements

Host-availability measurements include planned software backup and maintenance activity for DB2, CICS, VTAM, NCP, and MVS. Both database update and read-only availability are quantified. The CWS/CMS application is considered unavailable if any of the previously mentioned software or the host application is not available. The read-only time will be applicable during DB2 reorganization time only.

Host availability is measured by the CWS/CMS application from the host perspective.

3.3.2. LAN Server and Workstation Availability Measurements

Server availability is based on components of the server called modules. The modules are OS/2 LAN-server, Communication Manager, Enterprise Manager (CWS/CMS Application Code), CWS Administration, and DB2 Code. If any of these five software components or the hardware is unavailable, then the server is considered to be down. The availability requirement for the LAN servers is 99% availability based on a 7x24 schedule of operations and the total number of servers installed. The availability formula will be used based on the total minutes of all LAN servers up-time minus the aggregate monthly accumulative minutes for each outage.

Availability figures for servers and workstations will be based on the total number of devices in the state less the aggregate number of defective devices divided by the total number of devices. The aggregate numb er of devices will be collected at the ISSC call management system and will be reported in minutes. The total number of workstations will be based on the number of workstations in the dedicated counties.

For example, based on an installation of ten servers, for one month (31 days) the total number of minutes would be 446400 (10 X 44640). If one server was down for six hours in the month, then the uptime would be 446040 divided by [446040 plus 360 (60 X 6 for the outage)] which would equal 99.9% server availability for that month.

[2]Not all servers will be considered to be on a 24 X 7 schedule. 24 X 7 schedule requires county users to be available if the server goes down. A list of servers will be maintained and reported against based on the availability requirements at the county.

For example, the total time available will decrease depending on the county requirements to maintain the server. The total uptime for a server that is to be available 8 to 5 Monday through Friday for February will be equal to 10800 minutes (20 days X 9 hours/day X 60 minutes/hour), compared with a server that is to be available 24 X 7 in the same month which would be 40,320 minutes (28 days X 24 hours/day X 60 minutes/hour). The 99% available uptime would not change.

To meet availability requirements, ISSC will monitor and remotely take control of workstations, with customer approval, as required to support problem determination. The ISSC CWS/CMS Help Desk will be able to use workstation monitoring and control tools to evaluate and resolve problems.

If a dedicated county changes a workstation configuration, either ISSC must change the workstation back to the base configuration or ISSC will no longer be responsible for support to that workstation. In addition, such a change may alter the status of being a dedicated county.

3.4. Service Level Reporting

An end-of-the-month report will contain the cumulative minutes of outage on each area affecting availability of the host application, the LAN servers, and the workstations. Individual server outage by county will be included in this report.

NOTE: System availability is not a reported element until ADR/TSS Release 2. During the development of ADR/TSS Release 2, the system will be available 24 hours per day with exceptions for maintenance, software, and hardware scheduled changes.

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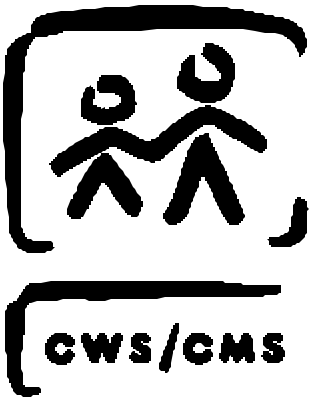
[2] Issue - Open - Implementation method to regularly review the list of county servers covered by this agreement will be determined during the next SLA review.

IV. Dedicated Counties System Response Time



4. Dedicated Counties System Response Time

Note: Measurement and recording of system response time service level objectives is a requirement in Release 2 and beyond. This section is based on the contract SRD, Section 14, 'Technical Requirements' and Appendix J Performance Criteria. This section is subject to modification after coordination with the counties.

4.1. Service Defined

The measurement and report of CWS/CMS end-user response time is based on start to finish elapsed time for each of four transaction categories: small, medium, large, and very large.

4.1.1. System Response Time Assumptions

The achievement of response time objectives is dependent upon the following workload assumptions about the system and its usage.

The SRD is being reviewed for 40% growth. Currently, the SRD has not changed. The SLA will be reviewed and updated when the SRD has been changed to reflect the 40% growth.

A user population of 8500 case workers and 1100 supervisors, each with their own workstation, is assumed per the *Systems Requirements Document*, Appendix J, Section 4A "Workload" on page J9. Caseload response time measurements will be based on the transaction classes further defined in Appendix J, "Executive Summary," Figure 1-1, "Estimated System Response Time" as follows:

- Small transactions - 80% of total workload (requests that do not require server or host services)
- Medium transactions - 17% of total workload (requests that require server and/or host services to complete)
- Large transactions - 2% of total workload (requests that require server and/or host services to complete)
- Very large transactions - 1% of total workload (requests that require server and/or host services to complete)

4.1.2. Configuration

ISSC is responsible for determining the configuration needed to meet SLA objectives.

The host system is a 3090 or equivalent processor with up to four 3990 controllers with sufficient DASD to handle State of California caseloads. There will be two 3745 front-end processors that connect to dual 16MPS token rings. The host will be connected to all servers via the HWDC WAN. This network makes use of multiple T1 connections from the host to its backbone network. The backbone, consisting of four multiple-connected routers, is connected (in most cases via LAN) to core routers. Core routers are connected via T1 links to access routers. Access routers are connected via 56K bit links to routers on the county LANs.

LAN servers are Pentium 90 MHz systems with 32-128 Mb of memory.

Workstations are PCs running DOS and MS Windows. They have 16 Mb of memory and use a minimum of a Pentium 75 Mhz Processor. Workstation configuration in a dedicated county will be used as the hardware baseline for the small transaction times.

The Model Office Lab in Boulder is used to simulate the dedicated counties and will use PCs configured with the following software: Windows for Workgroups 3.11, DOS 7.0, PCOM3270, Microsoft Mail, Microsoft Word, DCAF, Netview, and the CWS/CMS application.

All workstations are required to conform to constructed specifications. If the county changes a dedicated workstation configuration, either ISSC must change the workstation back to the base configuration or ISSC will no longer be responsible for support to that workstation. In addition, the change may alter the status of being a dedicated county.

4.2. Service Level Objective

The following table summarizes the response-time service-level objectives of the CWS/CMS application. Response time objectives exist for each of four categories of transactions: small, medium, large, and very large.

4.2.1. CWS/CMS Response-Time Standards from 1/27/97 to 1/23/99

Transaction Class	Non Peak Period/ Small Case vol.	Non Peak Period/ Large Case vol.	Weekly Peak hour	Notes
Small (model office based on dedicated county workstation)	1.8 sec.	2.4	N/A	Local workstation activity: -Open Notebook -Open Page -New Referral -Log off -New Document
Medium	6	7	7	<10,000 bytes returned on opening cases: -Log on/Caseload -Get Document -Search -Resource Open -Update Resource -Fingerprint Open -Update Referral -Update Fingerprint
Large	23	25	25	>9,999 & <100,000 bytes returned on opening cases -Update Case
Very Large	49	52	52	≥100,000 bytes returned on opening cases

Table 7: Response Time Objectives

*Case volume is defined as the amount of data resident in workstation cache memory, in bytes, at the time the transaction is executed. Small case volume (representative of two or fewer concurrently opened cases) is defined as less than 233,000 bytes of cache memory utilized. Large case volume (three or more opened cases) is defined as more than 233,000 bytes of cache memory utilized.

4.3. Service Level Measurement

System response time measurements will help monitor the CWS/CMS application's ability to process normal business functions under production conditions within acceptable response time objectives. Measurement data also will assist in system tuning and capacity planning of relevant CWS/CMS components to support ongoing achievement of service-level objectives.

CWS/CMS measurement activities include necessary component and system monitoring. Host response times are logged and monitored regularly to ensure that performance remains at required levels.

It is assumed that WAN use will be monitored by HWDC. By logging both end-to-end and host response times, WAN latency will be monitored by ISSC and reported via the end-of-month performance report. The CWS/CMS NetWorkStation (NWS) facilities will be used to monitor server use to ensure that sufficient server resources are in place.

System response time measurements will be based on the transaction class definition defined below and as measured and collected by the CWS/CMS application:

- Small - transactions that are local to the workstation and require only workstation resources.

  This measurement will be taken once in the Boulder lab environment and is based on the agreed to dedicated county workstation configuration. The test will be based on three active sessions and the averaging of the collective responses. The test will be repeated for the purpose of reevaluation of response time acceptability if changes are made to the workstation configuration.

- Medium - transactions that use both workstation and server resources and use relatively few host/network resources defined as involving less than 10,000 bytes of data transferred between host and workstation on requests.

- Large - transactions that involve more than, or equal to 10,000 bytes and less than 100,000 bytes of data transferred to the server from the host.

- Very Large - transactions that involve more than or equal to 100,000 bytes of data transferred to the server from the host.

4.4. Service Level Reporting

Response time measurements for the medium, large, and very large transaction classes will be measured at the county workstations. These measurements are collected on a continuous basis and logged at each server. The response time logs are consolidated daily.

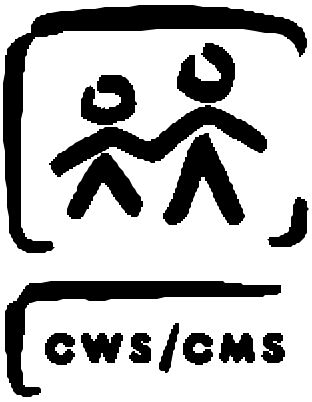
The end-of-the-month report will contain the cumulative performance minutes based on Table 7 ("CWS/CMS Response Time Standards from 1/27/97 to 1/23/99", p. 4-3) for medium, large, and very large transactions. Response times will be measured against the SLA objectives for dedicated counties only.

A second end-of-the-month report will provide the same statistics for individual server sites.

[3]Dial-in Response Time

[3] Issue - Open - Can the SLA have response time standards for remote access and dial-in. ISSC is reviewing architecture document on dial-in. This section will document the response time when agreed to.

V. Dedicated Counties Problem Resolution



5. Dedicated Counties Problem Resolution

5.1. Service Defined

Problem resolution is the process of taking actions required to permanently correct a reported problem. The process includes:

- Accurately defining the problem
- Identifying a solution
- Developing a plan to create and apply the solution
- Implementing the solution
- Creating and updating the problem with appropriate resolution data and verifying the solution was effective
- Permanently resolving the problem

The *ISSC Problem/Recovery Management Process Guide*, that is part of the *Maintenance Documentation Required for Ongoing System and Program Maintenance* deliverable, should be used if there are any questions with problem resolution. Any questions in the problem process discipline area should be directed to the Guide owner by contacting ISSC CWS/CMS Help Desk.

5.1.1. Resolution vs. Recovery

The problem bypass or recovery part of the problem process involves the partial or complete circumvention of a problem usually prior to its final resolution.

Resolution is defined as some action that was taken to prevent reoccurrence of the failure and/or a modification that has been applied to the code. For example:

- Initial Program Load (IPL) of remote server
- Code deleted or changed

5.1.2. Business Improvement Analysis (BIA)

The Business Improvement Analysis (BIA) process begins with the identification of problems contributing to missed service level objectives. BIA's are initiated by the Delivery Project Executive. Each problem that impacts the service level objectives of the project should have a BIA assigned. See the *ISSC Problem/Recovery Management Process Guide* for details of the process.

5.2. Service Level Objective

5.2.1. Problem Resolution Standards

Service level objectives for problem resolution are defined according to the following table and are based on a 24-hour day, 7-day week, beginning at the time the help desk logs the problem:

Problem Severity [1]	Permanent/Circumvented Fix Installed
1	1 Day
2	2 Days
3 [2]	14 Days
4 [2]	30 Days

Table 8: Systems Problem Severity Table

NOTE: 1. See the *ISSC Problem/Recovery Management Process Guide*; an extract appears below starting with section 5.3.2.

[4]2. To ensure Release 2 roll-out time frames are met, the code for Release 2 fixes will be defined into two groups (large and small). This will allow focus on successful implementation of ADR/TSS Release 2.

3. Server availability is critical. ISSC has agreed to have four-hour response time for on-site help on servers within metropolitan areas. Workstations and printers on-site support is next day.

5.3. Service Level Measurement

5.3.1. Severity Levels

- Problem severity level will be determined by the problem severity guidelines and is indicated in the problem record.
- The severity level of a problem can be lowered with the concurrence of the problem submitter (caller).
- Problem severity level may be raised when a problem reoccurs or when a problem with the potential to impact an SLA objective is not bypassed or circumvented.
- The escalation point for assigned severity levels is the SMC Coordinator.

5.3.2. Severity Level 1

Impact is critical and no bypass or alternative is available. The SLA objective is impacted. Severity 1 includes situations when the end user is unable to provide urgent services to clients through the use of CWS/CMS and where no manual or system work around is available.
Critical is defined as:

- Loss of application (whether single county, server, or entire user community). If you cannot do a search for prior history or you cannot save to the database, this would be an example of the "Loss of Application."
- Loss of the host system.
- Loss of the network.
- Loss of a server (printer, CWS/CMS, or mail server with no alternative server available).
- Loss of a printer with no other way to print.
- Total loss of service to the county or office.
- Individual Personal Computer (PC) outage with no other PC available.
- Unscheduled outages where service has not been restored and problem has not been bypassed or circumvented.

5.3.3. Severity Level 2

Impact is critical but alternative or by-pass is available. The SLA objective is impacted.
For example:

- MEDs is not available through the application, but the MEDs terminal is still available
- Degradation of application (for example, slow response time)
- Intermittent problems with the network
- Intermittent problems with a server

5.3.4. Severity Level 3

Impact is not critical but function is restricted.
For example:

- Degradation of a non-critical function (host, network, or server)
- Individual PC outage with other PC available

[4] Issue - Open - Severity 3 and 4 application fixes should be fixed and distributed depending on the type of problem and a mutually agreed to schedule. Application changes will be added to the system on a eight-week schedule.

- Solid or intermittent problems of low impact - no impact to SLA
- Problems that degrade but do not prevent accessibility or usability
- Unscheduled outages where service has been restored and problem has been successfully bypassed

5.3.5. Severity Level 4

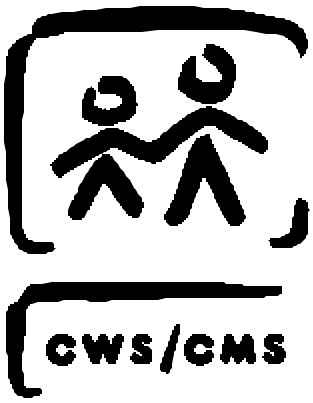
Impact is not critical and deferred maintenance is acceptable to end user.
For example:

- Problems of a low impact on the user
- No unscheduled outage involved
- No known SLA relevance

5.4. Service Level Reporting

Although there is no required problem resolution objectives reporting, ISSC is dedicated to providing quality service to our customers. Giving management a means to measure the quality of ISSC performance, a problem process discipline is documented in the *ISSC Problem/Recovery Process Guide* and has been established. This allows performance and availability to be measured and tracked. This is an ISSC internal process that we believe enhances our ability to contribute significantly to the success of the entire CWS/CMS Project.
An end-of-the-month report will reflect the total number of problems that occur on the system with regard to the type and severity of the problems that are closed within criteria.
Problem resolution will be formally reported in ADR/TSS Release 2. The state, counties, HWDC, and ISSC are dedicated to maintaining operations as the CWS offices are dependent upon ISSC performance. All problems will be reported against fixes according to their severity levels.

VI. Dedicated Counties SOC158 Requirements



6. Dedicated Counties SOC158 Requirements

6.1. Key Data Entry Support

ISSC will begin key data entry support in October 1997 and will provide input for manually-prepared Adoption/Probation SOC158 forms since adoption and probation workers will not have direct access to CWS/CMS workstations. As provided in the original contract, these manual Adoption/Probation SOC158 forms will be key entered by ISSC to CWS/CMS for the life of the contract. Per the state-provided figures in the RFP, volume is not to exceed 3,400 Adoption/Probation SOC158 forms per month consisting of 400 adds and 3000 changes.

6.1.1. List of Requirements Met By Key Data Entry

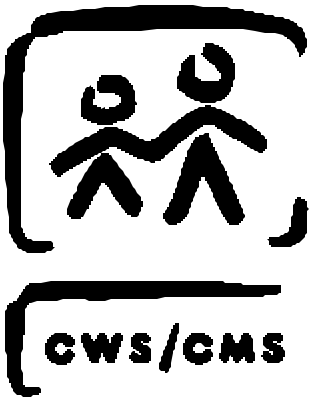
Automated Adoption/Probation SOC158 batch receipt and control processes will be established to log and track data entry materials from their receipt from the state until their return. The state will manually complete, submit daily, and correct the SOC158 forms. Final processes will be defined in conjunction with the state and approved using the contractually agreed to approval process.

ISSC will meet the following requirements:

- Record batches received by control number and date
- Record counts of forms fully entered error free
- Record counts of forms entered that contain minor errors requiring correction
- Record counts of forms with major errors that prevented input altogether

1. ISSC will enter Adoption/Probation SOC158s into the CWS/CMS system from a SOC158 form. The state will produce the pre-printed computer-generated SOC158 forms and distribute them to the originating agencies. CWS/CMS workstation key entry provides edit responses online instead of in a batch report. Errors will be noted directly on the agency-submitted SOC158 forms that will be forwarded for correction to the State FCIS Analyst in Sacramento. Data will be entered by ISSC within 24 hours of receipt of the batched forms from the state.
2. ISSC will return completed batches to the state for storage or distribution. The state will coordinate correction of forms for resubmitting. The resubmit count should not exceed a count of 3400 per month as a new occurrence.

VII. Dedicated Counties Other Contract Requirements



7. Dedicated Counties Other Contract Requirements

7.1. Production Level Operation Support

Production-level operational support is the process of providing our CWS/CMS team members with the hardware, software, facilities, operations support, systems management, and security necessary to deliver enterprise-wide data processing services to the state and counties using Systems Management Controls (SMC) disciplines.
SMC disciplines are the tools, techniques, and procedures required to plan, organize, measure, and control the delivery of the CWS/CMS. The SMC processes provide the disciplined environment ensuring the application of service required provided to the user in a consistent manner.
Each of the SMC disciplines contribute to this agreement and are explained below:

- Problem/Recovery Management D51E

  Problem Management is the process of recognizing, recording, tracking, reporting, and correcting all problems that affect the delivery of Information Systems (IS) services. Recovery Management is the process of planning, testing, and implementing the procedures and standards required to restore services to customers in the event of a system or component failure. Problem Management has been designed to identify the need for effective actions to Recovery Management. Recovery Management is the responsibility of assessing the business needs and risks associated with the failure of components.

- Change Management D51D

  Change Management is the process of planning, coordinating, monitoring, scheduling, and communicating changes affecting all IS resources.

  [5]End users will be notified prior to scheduled changes occurring according to process and standards in D51D.

- Configuration Management

  Configuration Management is the process of managing the physical and logical properties of information technology resources and their relationships while ensuring that service commitments are achieved.

[5] Issue - Open - Can the SLA explain how and when the users will be notified by ISSC for unscheduled and scheduled outages for all equipment owned by ISSC. The change management process requires notification of changes to the system. This process is waiting for a process and contact list to be set in place.

- Capacity Management D51G

  Capacity Management is the process of providing adequate resource capability to meet service-level agreements.

- Performance Management D51F

  Performance Management is the process of planning, defining, measuring, analyzing, reporting, and tuning the performance of resources.

- Batch Management

  Batch Management is the process of controlling batch-production work including scheduling resources, processing data and transactions, and distributing data and information between customers and facilities.

- On-Line Management (ISSC CWS/CMS Help Desk)

  On-Line Management is the process of coordinating the appropriate skills, information, tools, and procedures required to manage on-line networks (remote and local) and their supporting hardware and software systems.

7.2. ISSC Reporting

Report	Time Frame
Service Level Attainment Report *	Monthly
Performance Report	Monthly
Host CPU Utilization Report	Monthly
DASD Allocation Report	Monthly
Tape Utilization Report	Monthly

Table 9: ISSC Report Frequency

*The SLA monthly report will contain the four major components of this agreement: customer support, system availability, system response time, and problem resolution. One report will be provided by Boulder to the project office by the tenth working day.
Commencing with ADR/TSS Release 2 on January 27, 1997, ISSC will submit to the CWS/CMS Project Director a report or set of reports assessing ISSC's performance against the performance standards during the previous calendar month. This report, or set of reports, will be due by the fifteenth business day of each month. The first set of reports will be produced after the first full month in ADR/TSS Release 2 (March 1997).

7.3. Other ISSC Activity

Other Activity	Time Frame
Back up the CWS/CMS database	Weekly
Maintain the application and system software	On-going

Table 10: Other ISSC Activity

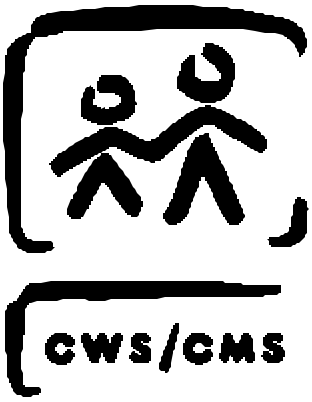
ISSC will provide appropriate security practices over physical and information assets during on-going support of the CWS/CMS project. (This security requirement is in Boulder; state counties must provide this service at each location.)
ISSC also will be responsible for investigating and correcting failures to meet performance standards by:

1. Initiating problem reports to identify root causes of failures

2. Reporting all problems to the CWS/CMS Project Director that could be expected to have a material adverse effect on the state operations
3. Making written recommendations to the CWS/CMS Project Director for improvement in procedures

NOTE: All reports in Table 9 on page 7-2 (ISSC Report Frequency) derived from Rider H of the contract will be developed and approved during the Field Test and Pilot reporting periods.

VIII. Dedicated Counties Attachments



8. Attachments

8.1. ISSC Support Services

In general, ISSC responsibilities include the following services:

- System Management Controls

  ISSC will be responsible for documenting and executing System Management Processes and Controls for each of the following disciplines:

  - On-Line Management (ISSC Help Desk) D51C
  - Change Management D51D
  - Problem/Recovery Management D51E
  - Performance Management D51F
  - Capacity Management D51G
  - Configuration Management
  - Batch Management

- Application Production Support

  ISSC will support all aspects of the CWS/CMS application. This includes support for coding, testing, training, user documentation, and procedures for the ISSC Help Desk and third-party software (templates) associated with the application.

  The CWS/CMS application Release 1 and 2 code fixes are subject to interpretation. All fixes must be assessed to determine if the fix should be considered a problem or enhancement to the code. This interpretation is mutually agreed to by the state and ISSC Executive Management or the assigned committee.

- Operational Procedures and Standards

  ISSC will document its standards and procedures in paper and electronic formats.

- Computer Operations

  ISSC will provide computer operations support for the development, testing, training, and production environments. The operational support will be provided both in the Boulder facility as well as the remote facility in Sacramento. Computer Operations include monitoring of system consoles, tape operations (including tape library and tape mounts), and development of automated operations.

- Systems Programming Support

  ISSC will provide installation, maintenance, customization, and support of all the systems software required by the application that are listed in the contract.

- Data Storage Management

  ISSC will be responsible for Data Storage Management. ISSC will work with the state to define the scope of this service. In general, the service will include the use of Systems Managed Storage (SMS) to ensure only recently-used data is resident on disk drives.

- Production Migration

  ISSC will be responsible for establishing a migration process for the application from the development to the testing, training, and production environments. Migration of newer versions of these applications will be controlled by the change management business process (D51D) and a migration tool.

- Database Management and Administration

ISSC will be responsible for the physical placement of databases, performance, and tuning. ISSC will be responsible for physical database administration for the development, testing, training, and production environments.

- Security Management

  ISSC is responsible for the physical and logical security for the development, testing, training, and production environments.

- [6]MACs (Moves, Adds, and Changes to hardware)

  The Move, Add, and Change process will be documented by ISSC and include moving an environment. The environment move will be outside of the current domain and be broken down by the number of devices moving or changing. For example, 0 - 15, 15 - 25, 25 - 75, and 75 - 150, 150+ will be used.

8.2. Service Level Meeting

A formal SLA management group consisting of representatives from both ISSC and the State of California will be established to monitor and manage the performance defined under this SLA. This group will meet on a monthly basis to review the Service Level Attainment Report.

8.3. Security Standards for Local Area Networks

While the information content of servers is owned by the State of California CWS/CMS Project, management ownership of the servers remains with ISSC. Under ISSC Security Standards document ITCS201, ISSC needs to maintain security on management LAN servers owned by ISSC. Under the following exception titles, the State/County LAN Administrator will have certain responsibilities.

If the following security standards (Sections 8.3.1 through 8.3.7) are not in place and this is determined to be the cause of an availability problem with an ISSC LAN server, ISSC is not liable for liquid damages caused by the loss of server.

8.3.1. Physical Access Controls - State/County LAN Administrator

ISSC is responsible to deliver availability for the servers. Since physical access to information processing exposes the project to risks that could affect availability, the count and administration management must institute controls to interdict physical access that are commensurate with the risk and possible loss of availability to the server.

Controlled access to server closets include:

- Area owner needs to be clearly identified
- Area to be locked, even when attended
- Access to the area is restricted to only those authorized by the area owner
- Access to the area is only allowed from internal space; emergency exit doors should be alarmed
- Exterior windows should not be permitted in ground-floor installations
- Access to the area is controlled by electronically-controlled access unless specifically exempted by the area owner's director or equivalent level executive.

8.3.2. Storage Media - State/County LAN Administrator

The state and counties own the controls of storage media for backups. Storage media includes magnetic tape and removable and non-removable optical for magnetic disks and cartridges.

In LAN environments, data is typically created, accessed, and stored on magnetic disks on LAN workstations and servers. This data generally remains on-line and is not placed on removable media (other than for backup purposes) or routinely mounted/dismounted for business processing.

A storage-media custodian is an individual who has accepted the responsibility for storage of removable media on behalf of other people. Unlike media used for normal system/data backup purposes, media placed in custodial care must be accounted for. All movement and control of media in the custodian's storage media library must be logged.

[6] Issue - Open - MAC's - Time frame commitment (Turn around and Response). This section is currently being developed by the State and ISSC.

8.3.3. LAN Connected Printers - State/County LAN Administrator

All hardware for LAN connected printers and plotters (adding paper, clearing jams, and so on) fall under the responsibility of the State/County LAN administrator. The control of print output is the responsibility of the end user who should use the facilities provided and abide by the printer owner's rules. ISSC owns the software piece for the converted printers. ISSC is responsible for network printer operations.

8.3.4. Logical Access Controls - State/County LAN Administrator

Certain logical access for county servers should be under the control of the counties. Logical access controls that fall under county responsibility include the following primary topics:

- Define and Protect Resources - Ensure that each resource on the system can be identified, access to the resource can be allowed at the appropriate levels for authorized users, and access is denied for unauthorized users.
- System and Security Administration - Ensure that only authorized users can set, modify, or disable system security functions.

8.3.5. Security Architecture County Responsibilities - State/County LAN Administrator

In both a co-existent LAN and dedicated environment, the county is fully responsible for security maintenance and administration. The ISSC CWS/CMS Help Desk is always responsible for the software security of the CWS/CMS server.

8.3.6. Logon to County LAN - State/County LAN Administrator

The IBM LAN Server Program on the CWS/CMS server will create a security audit log entry for each invalid logon attempt. This log will contain two major classifications of failed attempts:

- Invalid UserID; recorded by time-stamp and workstation ID only.
- Valid UserID but invalid password; recorded by UserID, time-stamp, and workstation ID.

The log will be copied once a day to a read-only file available to the state, county, or office security administrator. It will be the responsibility of the state, county, or office security administrator to determine if these log entries indicate a breach or attempted breach in security. It will be the responsibility of the state, county, or office security administrator to take any actions deemed necessary as a result of this determination.

8.3.7. UserID and Password Maintenance - State/County LAN Administrator

The state, county, or office security administrator is responsible for creating and maintaining UserIDs and passwords. The ISSC CWS/CMS Help Desk will assist with user's server and host password synchronization when requested.

8.3.8. [7]Confidentiality Data Standards

All ISSC employees will be made aware of California State Requirement of Section 10850 of Welfare and Institutions Code by...

8.4. External Interfaces

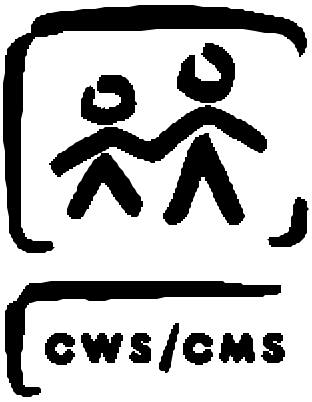
This section will be used to explain the external interfaces that ISSC needs to provide and is based on the SRD sections L.06, L.07a, L.07c, and L.07d. The key aspect of this section will be to emphasize the importance of HWDC's role in attaining control over the nightly batch runs. If inputs are not received from HWDC on a timely basis, the output via batch to the county servers will be in jeopardy.

8.5. External Interfaces Release One

ISSC in Boulder requires a connection to HWDC for MEDS external interface. The connection is used by the CWS/CMS application for file clearance. The connection is an ISC (Inter System Communication) connection between the MEDS CICS system and the CWS/CMS CICS system. MEDS is available from 5:30 AM to 12:00 PM Monday through Friday and 5:30 AM to 10:00 PM Saturday and Sunday. The file clearance data will be collected when MEDS is available and the host production CICS is available. Under Release 1, CICS will be available 24-hours per day pending the scheduled maintenance and maintenance window time frame of Sunday from 3:00 AM to 10:00 AM, PT.

[7] Issue - Open - Can SLA establish confidentiality standards? All ISSC this section is currently being reviewed by ISSC.

IX. Co-Existent Counties Customer Support (ISSC Help Desk)



9. Co-Existent Counties Customer Support (ISSC Help Desk)

9.1. Service Defined

Customer support provides Help Desk services for the CWS/CMS application, the mainframe system, associated hardware and software, LAN support, WAN support, and hardware maintenance and service coordination with the approved maintenance and service vendors. Service also includes workstation and printer support.
Support will be provided to the end user through a single, toll-free telephone number connected to the ISSC CWS/CMS Help Desk and delivered in three levels.

- Level One support provides initial problem determination, problem logging and tracking, and problem resolution.
- Level Two support provides in-depth problem determination, problem source identification, and problem resolution.
- Level Three support provides final resolution on defects.
- Level One county help desks are responsible for level-one support for everything except for the CWS/CMS application.

Any questions or concerns with the customer support section of this SLA should first be addressed by referring to the *ISSC CWS/CMS Help Desk Roles and Responsibilities, and Process Guide* documentation that covers areas beyond the scope of this SLA.

9.2. Service Level Objective

ISSC will record the number of calls to the ISSC CWS/CMS Help Desk during the initial 90 - 180 days of R2 production (May 5, 1997 - August 3, 1997). The State and ISSC executive management then will mutually agree to an ISSC CWS/CMS Help Desk baseline for the contract volumes plus level purchased above baseline by counties. The baseline for off-shift will be calculated at 15% of the agreed prime shift baseline volume.
One issue to consider when determining the call baseline is the number of calls required to resolve the previously opened tickets.

9.2.1. Customer Support Service Hours

The ISSC CWS/CMS Help Desk will be operational and provide service according to the following project milestones:

Project Milestones	Dates	Service Schedules
1. OA production to ADR/TSS Release 2	1/15/96 - 1/27/97	Mon-Fri, 8 AM-5 PM[2,]
2. ADR/TSS Release 2	1/27/97 - 30 days after last installation	Mon-Sun, 24 Hours
3. CWS/CMS Ops. & Maint. (R2)	30 days after last installation - 1/23/99	Mon-Fri, 7 AM-7 PM Sat, Sun, Holiday, noon-midnight

Table 11: ISSC CWS/CMS Help Desk Schedule

Notes: 1. All times given as Pacific Time (PT), whether Standard or Daylight Savings.
2. Off-shift hours support will respond within one hour of receiving a page.

9.3. Service Level Measurement

Resource usage for this category will be measured as the aggregate number of ISSC Help Desk incoming calls during the applicable measurement period necessary to handle end-user calls and referrals. ISSC CWS/CMS Help Desk calls will be measured using a call answering/monitoring system.
One call for assistance, whether by electronic or voice entry, into the ISSC CWS/CMS Help Desk (excluding calls to the Systems Status recording) equals one Resource Unit (RU). Baseline call volume will be based on the number of RUs during an initial specified period as defined in the contract. Calls, however, resulting from ISSC's failure to

update any required "Systems Status" messages pursuant to contract requirements will not be included when calculating the monthly ISSC CWS/CMS Help Desk resource usage. [8]The "System Status" message will include information on the status of the network, host, and related ISSC responsible application software. Calls resulting from ISSC-caused failure should not be charged back to the counties.

9.3.1. ISSC CWS/CMS Help Desk Baseline Call Volumes

ISSC CWS/CMS Help Desk will provide service according to the following volume table:

ISSC CWS/CMS Help Desk Baseline Call Volume (Total)	Help Desk Number of Calls Prime	Help Desk Number of Calls Non-Prime
TBD	TBD	TBD

Table 12: SLA ISSC CWS/CMS Help Desk Number of Calls

Measurements defined in paragraphs 9.3.2 - 9.3.4 are supplementary measurements for management use in trends analysis.

9.3.2. ISSC CWS/CMS Help Desk Baseline Call Hold Time

ISSC CWS/CMS Help Desk will provide service according to the following volume table. This table is for average wait time for both prime and non-prime hours.

ISSC CWS/CMS Help Desk Baseline Call AvgWait Time	Objective % of Help Desk Calls Answered < 3 minutes	Actual % of Help Desk Calls Answered < 3 minutesPrime
% of calls answered <3 minutes	100%	%

Table 13: SLA ISSC CWS/CMS Help Desk Percent of Call Wait Time

[8] Issue Opened - Warranty v. application calls and duplicate calls should be excluded from the baseline count. Warranty issue is still being discussed with regards to being charged for help desk calls that result from issues or problems resulting from hardware supplied by ISSC.

9.3.3. ISSC CWS/CMS Help Desk Baseline Call Resolve Rate

ISSC CWS/CMS Help Desk will provide service according to the following volume table for resolve rate. The overall percentages will be calculated from non-dispatchable type calls (hardware calls will not be included):

Help Desk Percent of Resolved First Calls: Objective	Help Desk Number of Resolved First Calls: Actual	Delta from Last month
80%	%	

Table 14: SLA ISSC CWS/CMS Help Desk Calls Fixed the First Time

9.3.4. ISSC CWS/CMS Help Desk Baseline Call Abandoned Rate

ISSC CWS/CMS Help Desk will provide service according to the following volume table:

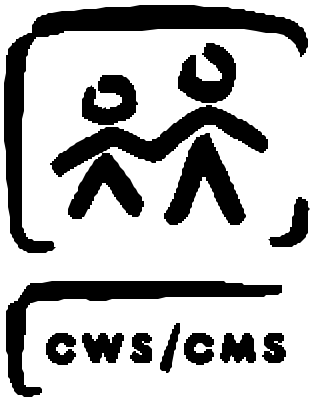
Percentage of Help Desk Calls Abandoned: Objective	Percentage of Help Desk Calls Abandoned: Actual
less than 8%	TBD

Table 15: SLA ISSC CWS/CMS Help Desk Percent of Calls Abandoned

9.4. Service Level Reporting

Customer and ISSC call and problem-management statistical reports will be generated by ISSC that will measure the ISSC CWS/CMS Help Desk hours and call volume metrics. Statistical reports will be generated for each of the co-existent counties and CDSS for Precent of Resolved First Call. Exact format and design will be defined during the initial reporting period.

X. Co-Existent Counties System Availability



10. Co-Existent Counties System Availability

10.1. Service Defined

Caseworkers in the State of California need to have the complete CWS/CMS system available to them so they can do their job. Our job as a team is to see that the various elements of the system are available to the caseworkers. ISSC, the HWDC, and the counties each share in the ownership and subsequent responsibility of these pieces as reflected by areas of expertise discussed in this section. The methods and tools for measuring performance also are addressed.

ISSC is responsible for servicing and maintaining compliance with availability measurement and management requirements related to CWS/CMS application components of the host, all servers, LANs, workstations, and printers. Managing the availability of the Wide Area Network (WAN) and the equipment at County sites relating to the WAN is the responsibility of HWDC and the counties.

The county will manage all physical aspects of availability related to the operation of printers attached to their CWS/CMS LANs and all functions related to E-Mail administration. ISSC will manage printer queues.

The physical aspects of printers managed by the counties include:

- Supply and load suitable printer paper
- Clear paper jams
- Manage out-of-paper conditions
- Reconnect cable disconnects
- Replace toner cartridges as needed
- Ensure power switch "ON"

10.1.1. System Availability During Conversion

Conversion is the process of converting the database from SB/CWS (San Bernardino Child Welfare System), LA CIS (Los Angeles Children Information System), SSRS (Social Services Reporting System), and FCIS (Foster Care Information System) to Release 2 application code. Conversion will begin January 24, 1997, with each conversion period scheduled for a 72-hour period centered on weekends. Each conversion period may include more than one county and more than one database.

For each database conversion period, it is expected to require 2-3 hours. During this time, all counties associated with this database will be affected. During a conversion period, counties in the process of being converted will have read-only access to the affected database during the 2-3 hour actual conversion period plus the period of time required to read and transport the database from the county to the ISSC data center. The total time of read-only access for counties being converted is expected to span approximately 24 hours.

Counties that have been previously converted to CWS/CMS will have update access to the CWS/CMS database being converted except for the 2-3 hour actual conversion period of the follow-on counties. During this time, previously converted counties will have read-only access. The conversion time will not be considered outage time but will be considered to be available for conversion.

FCIS for Release 1 at Glenn County will be converted at the start of base system production. Data for the rest of Glenn County will be converted prior to 01/17/97 and the start of Release 2.

The schedule for conversions will be published in advance and affected counties will be notified. The objective of conversion is to have the system available by 8:00 AM Monday morning.

10.2. Service Level Objective

10.2.1. Systems Availability Standards

Service-level objectives for system availability for co-existent counties are:

CWS/CMS Environment	System Availability	Read-Only Availability
Host Application	98.5%	99.0%
LAN Servers	99.0%	Not Applicable
Workstations	99.0%	Not Applicable

Table 16: Systems Availability Percentages

10.3. Service Level Measurement

10.3.1. Host-System-Availability Measurements

Host-availability measurements include planned software backup and maintenance activity for DB2, CICS, VTAM, NCP, and MVS. Both database update and read-only availability are quantified. The CWS/CMS application is considered unavailable if any of the previously mentioned software or the host application is not available. The read-only time will be applicable during DB2 reorganization time only.

Host availability is measured by the CWS/CMS application from the host perspective.

10.3.2. LAN Server and Workstation Availability Measurements

Server availability is based on components of the server called modules. The modules are OS/2 LAN-server, Communication Manager, Enterprise Manager (CWS/CMS Application Code), CWS Administration, and DB2 Code. If any of these five software components or the hardware is unavailable, then the server is considered to be down. The availability requirement for the LAN servers is 99% availability based on a 7x24 schedule of operations and the total number of servers installed. The availability formula will be used based on the total minutes of all LAN servers up-time minus the aggregate monthly accumulative minutes for each outage.

Availability figures for servers and workstations will be based on the total number of devices in the state less the aggregate number of defective devices divided by the total number of devices. The aggregate number of devices will be collected at the ISSC call management system and will be reported in minutes. The total number of workstations will be based on the number of workstations in the dedicated counties.

For example, based on an installation of ten servers, for one month (31 days) the total number of minutes would be 446400 (10 X 44640). If one server was down for six hours in the month, then the uptime would be 446040 divided by [446040 plus 360 (60 X 6 for the outage)] which would equal 99.9% server availability for that month.

[9]Not all servers will be considered to be on a 24 X 7 schedule. 24 X 7 schedule requires county users to be available if the server goes down. A list of servers will be maintained and reported against based on the availability requirements at the county.

For example, the total time available will decrease depending on the county requirements to maintain the server. The total uptime for a server that is to be available 8 to 5 Monday through Friday for February will be equal to 10800 minutes (20 days X 9 hours/day X 60 minutes/hour), compared with a server that is to be available 24 X 7 in the same month which would be 40,320 minutes (28 days X 24 hours/day X 60 minutes/hour). The 99% available uptime would not change.

To meet availability requirements, ISSC will monitor and remotely take control of workstations, with customer approval, as required to support problem determination. The ISSC CWS/CMS Help Desk will be able to use workstation monitoring/control tools to evaluate/resolve problems only in those counties that have DCAF.

10.4. Service Level Reporting

An end-of-the-month report will contain the cumulative minutes of outage on each area affecting availability of the host application, the LAN servers, and the workstations. For example, individual server outage by county will be included in this report.

NOTE: System availability is not a reported element until ADR/TSS Release 2. During the development of ADR/TSS Release 2, the system will be available 24 hours per day with exceptions for maintenance, software, and hardware scheduled changes.

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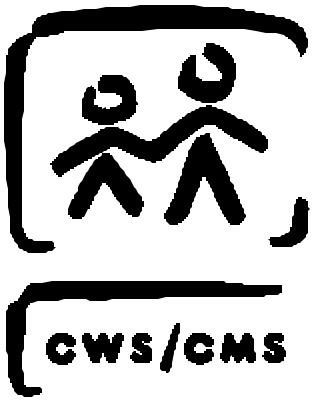
[9] Issue - Open - Implementation method to regularly review the list of county servers covered by this agreement will be determined during the next SLA review.

XI. Co-Existent Counties System Response Time



11. Co-Existent Counties System Response Time

Note: Measurement and recording of system response time service level objectives is a requirement in Release 2 and beyond. This section is based on the contract SRD, Section 14, 'Technical Requirements' and Appendix J Performance Criteria. This section is subject to modification after coordination with the counties.

11.1. Service Defined

The measurement and report of CWS/CMS end-user response time is based on start to finish elapsed time for each of four transaction categories: small, medium, large, and very large.

11.1.1. System Response Time Assumptions

The achievement of response time objectives is dependent upon the following workload assumptions about the system and its usage.

The SRD is being reviewed for 40% growth. Currently, the SRD has not changed. The SLA will be reviewed and updated when the SRD has been changed to reflect the 40% growth.

A user population of 8500 case workers and 1100 supervisors, each with their own workstation, is assumed per the *Systems Requirements Document*, Appendix J, Section 4A "Workload" on page J9. Caseload response time measurements will be based on the transaction classes further defined in Appendix J, "Executive Summary," Figure 1-1, "Estimated System Response Time" as follows:

- Small transactions - 80% of total workload (requests that do not require server or host services)
- Medium transactions - 17% of total workload requests that require server and/or host services to complete)
- Large transactions - 2% of total workload (requests that require server and/or host services to complete)
- Very large transactions - 1% of total workload (requests that require server and/or host services to complete)

11.1.2. Configuration

ISSC is responsible for determining the configuration needed to meet SLA objectives.

The host system is a 3090 or equivalent processor with up to four 3990 controllers with sufficient DASD to handle State of California caseloads. There will be two 3745 front-end processors that connect to dual 16MPS token rings. The host will be connected to all servers via the HWDC WAN. This network makes use of multiple T1 connections from the host to its backbone network. The backbone, consisting of four multiple-connected routers, is connected (in most cases via LAN) to core routers. Core routers are connected via T1 links to access routers. Access routers are connected via 56K bit links to routers on the county LANs.

LAN servers are Pentium 90 MHz systems with 32-128 Mb of memory.

Workstations are PCs running DOS and MS Windows. They have 16 Mb of memory and use a minimum of a Pentium 75 Mhz Processor Workstation configuration in a dedicated county will be used as the hardware baseline for the small transaction times.

The Model Office Lab in Boulder is used to simulate the co-existent counties and will use PCs configured with the following software: Windows for Workgroups 3.11, DOS 7.0, PCOM3270, Microsoft Mail, Microsoft Word, DCAF, Netview, and the CWS/CMS Application.

11.2. Service Level Objective

Although there are no response-time service-level objectives of the CWS/CMS application in co-existent counties, response time numbers still exist for each of three categories of transactions: medium, large, and very large. These response times will still be reported on.

Case volume is defined as the amount of data resident in workstation cache memory, in bytes, at the time the transaction is executed. Small case volume (representative of two or fewer concurrently opened cases) is defined as less than 233,000 bytes of cache memory utilized. Large case volume (three or more opened cases) is defined as more than 233,000 bytes of cache memory utilized.

11.3. Service Level Measurement

System response time measurements will help monitor the CWS/CMS application's ability to process normal business functions under production conditions within acceptable response time objectives. Measurement data also will assist in system tuning and capacity planning of relevant CWS/CMS components to support ongoing achievement of service-level objectives.

CWS/CMS measurement activities include necessary component and system monitoring. Host response times are logged and monitored regularly to ensure that performance remains at required levels.
It is assumed that WAN use will be monitored by HWDC. By logging both end-to-end and host response times, WAN latency will be monitored by ISSC and reported via the end-of-month performance report. The CWS/CMS NetWorkStation (NWS) facilities will be used to monitor server use to ensure that sufficient server resources are in place.
System response time measurements will be based on the transaction class definition defined below and as measured and collected by the CWS/CMS application, even though the SLA objectives are based on a dedicated environment, co-existent counties will be reported on as well:

- Small - transactions that are local to the workstation and require only workstation resources.

  This measurement will be taken once in the Boulder lab environment and is based on the agreed to dedicated county workstation configuration. The test will be based on three active sessions and the averaging of the collective responses. The test will be repeated for the purpose of reevaluation of response time acceptability if changes are made to the workstation configuration.

- Medium - transactions that use both workstation and server resources and use relatively few host/network resources defined as involving less than 10,000 bytes of data transferred between host and workstation on requests.

- Large - transactions that involve more than, or equal to 10,000 bytes and less than 100,000 bytes of data transferred to the server from the host.

- Very Large - transactions that involve more than or equal to 100,000 bytes of data transferred to the server from the host.

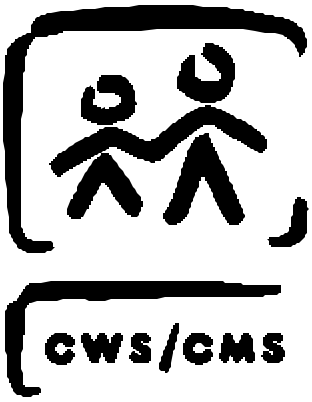
11.4. Service Level Reporting

Response time measurements for the medium, large, and very large transaction classes will be measured at the co-existent county workstations. These measurements are collected on a continuous basis and logged at each server. The response time logs are consolidated daily.
The end-of-the-month report will contain the cumulative performance minutes based on Table 17 (Response Time Objectives, p.11-1) for medium, large, and very large transactions. Response times will be measured against the SLA objectives for dedicated counties only.
A second end-of-the-month report will provide the same statistics for individual server sites.

11.5. [10]Dial-in Response Time

[10] Issue - Open - Can the SLA have response time standards for remote access and dial-in. ISSC is reviewing architecture document on dial-in. This section will document the response time when agreed to.

XII. Co-Existent Counties Problem Resolution



12. Co-Existent Counties Problem Resolution

12.1. Service Defined

Problem resolution is the process of taking actions required to permanently correct a reported problem. The process includes:

- Accurately defining the problem
- Identifying a solution
- Developing a plan to create and apply the solution
- Implementing the solution
- Creating and updating the problem with appropriate resolution data and verifying the solution was effective
- Permanently resolving the problem

The *ISSC Problem Management Process Guide D51E*, which is part of the *Maintenance Documentation Required for Ongoing System and Program Maintenance* deliverable, should be used if there are any questions with problem resolution. Any questions in the problem process discipline area should be directed to the *Guide* owner by contacting ISSC CWS/CMS Help Desk.

12.1.1. Resolution vs. Recovery

The problem bypass or recovery part of the problem process involves the partial or complete circumvention of a problem usually prior to its final resolution.

Resolution is defined as some action that was taken to prevent recurrence of the failure and/or a modification that has been applied to the code. For example:

- Initial Program Load (IPL) of remote server
- Code deleted or changed

12.1.2. Business Improvement Analysis (BIA)

The Business Improvement Analysis (BIA) process begins with the identification of problems contributing to missed Service Level Objectives. BIA's are initiated by the Delivery Project Executive. Each problem that impacts the Service Level Objectives of the project should have a BIA assigned. See the *ISSC Problem/Recovery Management Process Guide D51E* for details of the process.

12.2. Service Level Objective

12.2.1. Problem Resolution Standards

Service level objectives for problem resolution are defined according to the following table and are based on a 7-day week, beginning at the time the Help Desk logs the problem:

Problem Severity [1]	Permanent/Circumvented Fix Installed
1	1 Day
2	2 Days
3 [2]	14 Days
4 [2]	30 Days

Table 18: Systems Problem Severity Table

NOTE: 1. See the *ISSC Problem/Recovery Management Process Guide* D51E; an extract appears below starting with section 12.3.2.

[11]2. To ensure Release 2 roll-out time frames are met, the code for Release 2 fixes will be defined into two groups (large and small). This will allow focus on successful implementation of ADR/TSS Release 2.

3. Server availability is critical. ISSC has agreed to have four-hours response time on-site help on servers within metropolitan areas. Workstations and printers on-site support is next day.

12.3. Service Level Measurement

12.3.1. Severity Levels

- Problem severity level will be determined by the problem severity guidelines and is indicated in the problem record.
- The severity level of a problem can be lowered with the concurrence of the problem submitter (caller).
- Problem severity level may be raised when a problem reoccurs or when a problem with the potential to impact an SLA objective is not bypassed or circumvented.
- The escalation point for assigned severity levels is the SMC Coordinator.

12.3.2. Severity Level 1

Impact is critical and no bypass or alternative is available. The SLA objective is impacted. Severity 1 includes situations when the end user is unable to provide urgent services to clients through the use of CWS/CMS and where no manual or system workaround is available.
Critical is defined as:

- Loss of application (whether single county, server, or entire user community). If you cannot do a search for prior history or you cannot save to the database, this would be an example of the "Loss of Application."
- Loss of the host system.
- Loss of the network.
- Loss of a server. (Printer, CWS/CMS, or Mail server with no alternative server available).
- Loss of printer when there is no other way to print.
- Total loss of service to the county or office.
- Individual Personal Computer (PC) outage with no other PC available.
- Unscheduled outages where service has not been restored and problem has not been bypassed or circumvented.

12.3.3. Severity Level 2

Impact is critical but alternative or by-pass is available. The SLA objective is impacted.
For example:

- MEDs is not available through the application, but the MEDs terminal is still available
- Degradation of application (for example, slow response time)
- Intermittent problems with the network
- Intermittent problems with a server

12.3.4. Severity Level 3

Impact is not critical but function is restricted.
For example:

- Degradation of a non-critical function (for example, host, network, or server)
- Individual PC outage with other PC available

[11] Issue - Open - Severity 3 and 4 application fixes should be fixed and distributed depending on the type of problem and a mutually agreed to schedule. Application changes will be added to the system on a eight-week schedule.

- Solid or intermittent problems of low impact - no impact to SLA
- Problems that degrade but do not prevent accessibility or usability
- Unscheduled outages where service has been restored and problem has been successfully bypassed

12.3.5. Severity Level 4

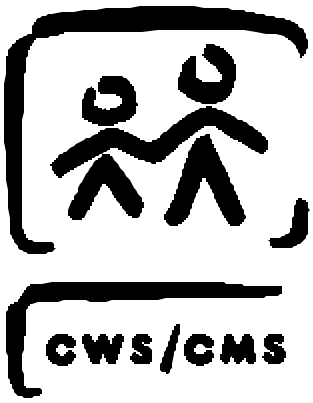
Impact is not critical and deferred maintenance is acceptable to end user.
For example:

- Problems of a low impact on the user
- No unscheduled outage involved
- No known SLA relevance

12.4. Service Level Reporting

Although there is no required problem resolution objectives reporting, ISSC is Co-Existent to providing quality service to our customers. Giving management a means to measure the quality of ISSC performance, a problem process discipline is documented in the *ISSC Problem/Recovery Management Process Guide D51E* and has been established. This allows performance and availability to be measured and tracked. This is an ISSC internal process that we believe enhances our ability to contribute significantly to the success of the entire CWS/CMS Project.
An end-of-the-month report will reflect the total number of problems that occur on the system with regard to the type and severity of the problems closed within criteria.
Although Problem Resolution will not be formally reported until ADR/TSS Release 2, the state, counties, HWDC, and ISSC are dedicated to maintaining operations as the CWS offices are dependent upon ISSC performance. All problems will be fixed according to their severity levels.

XIII. Co-Existent Counties SOC158 Requirements



13. Co-Existent Counties SOC158 Requirements

13.1. Key Data Entry Support

ISSC will begin Key Data Entry Support in October 1997 and will provide input for manually prepared Adoption/Probation SOC158 forms since adoption and probation workers will not have direct access to CWS/CMS workstations. As provided in the original contract, these manual Adoption/Probation SOC158 forms will be key entered by ISSC to CWS/CMS for the life of the contract. Per the state-provided figures in the RFP, volume is not to exceed 3,400 Adoption/Probation SOC158 forms per month consisting of 400 adds and 3000 changes.

13.1.1. List of Requirements Met By Key Data Entry

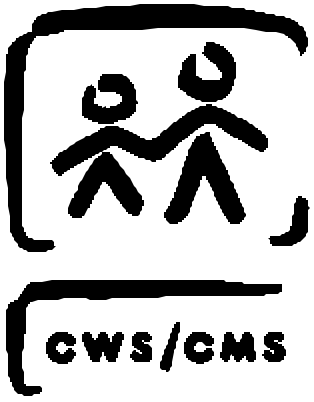
Automated Adoption/Probation SOC158 batch receipt and control processes will be established to log and track data entry materials from their receipt from the state until their return. The State will manually complete, submit daily, and correct the SOC158 forms. Final processes will be defined in conjunction with the state and approved using the contractually agreed to approval process.

ISSC will meet the following requirements:

- Record batches received by control number and date
- Record counts of forms fully entered error free
- Record counts of forms entered that contain minor errors requiring correction
- Record counts of forms with major errors that prevented input altogether

1. ISSC will enter Adoption/Probation SOC158s via the CWS/CMS system from a SOC158 form. The state will produce the pre-printed computer-generated SOC158 forms and distribute them to the originating agencies. CWS/CMS workstation key entry provides edit responses on-line instead of in a batch report. Errors will be noted directly on the agency submitted SOC158 forms that will be forwarded for correction to the State FCIS Analyst in Sacramento. Data will be entered by ISSC within 24 hours of receipt of the batched forms from the state.
2. ISSC will return completed batches to the state for storage or distribution. The state will coordinate correction of forms for resubmitting. The resubmit count should not exceed a count of 3400 per month as a new occurrence.

XIV. Co-Existent Counties Other Contract Requirements



14. Co-Existent Counties Other Contract Requirements

14.1. Production Level Operation Support

Production-level operational support is the process of providing our CWS/CMS team members with the hardware, software, facilities, operations support, systems management, and security necessary to deliver enterprise-wide data processing services to the state and counties using Systems Management Controls (SMC) disciplines.
SMC disciplines are the tools, techniques, and procedures required to plan, organize, measure, and control the delivery of the CWS/CMS. The SMC processes provide the disciplined environment ensuring the application of service required provided to the user in a consistent manner.
Each of the SMC disciplines contribute to this agreement and are explained below:

- Problem/Recovery Management D51E

  Problem Management is the process of recognizing, recording, tracking, reporting, and correcting all problems that affect the delivery of Information Systems (IS) Services. Recovery Management is the process of planning, testing, and implementing the procedures and standards required to restore services to customers in the event of a system or component failure. Problem Management has been designed to identify the need for effective actions to Recovery Management. Recovery Management is the responsibility of assessing the business needs and risks associated with the failure of components.

- Change Management D51D

  Change Management is the process of planning, coordinating, monitoring, scheduling, and communicating changes affecting all IS resources.

  [12]End users will be notified prior to scheduled changes occurring according to process and standards in D51D.

- Configuration Management

  Configuration Management is the process of managing the physical and logical properties of information technology resources and their relationships while ensuring that service commitments are achieved.

- Capacity Management D51G

  Capacity Management is the process of providing adequate resource capability to meet service-level agreements.

- Performance Management D51F

  Performance Management is the process of planning, defining, measuring, analyzing, reporting, and tuning the performance of resources.

- Batch Management

  Batch Management is the process of controlling batch production work including scheduling resources, processing data and transactions, and distributing data and information between customers and facilities.

- On-Line Management (ISSC CWS/CMS Help Desk)

  On-Line Management is the process of coordinating the appropriate skills, information, tools, and procedures required to manage on-line networks (remote and local) and their supporting hardware and software systems.

[12] Issue - Open - Can the SLA explain how and when the users will be notified by ISSC for unscheduled and scheduled outages for all equipment owned by ISSC. The change management process requires notification of changes to the system. This process is waiting for a process and contact list to be set in place.

14.2. ISSC Reporting

Report	Time Frame
Service Level Attainment Report *	Monthly
Performance Report	Monthly
Host CPU Utilization Report	Monthly
DASD Allocation Report	Monthly
Tape Utilization Report	Monthly

Table 19: ISSC Report Frequency

*The SLA monthly report will contain the four major components of this agreement: customer support, system availability, system response time, and problem resolution.
Commencing with ADR/TSS Release 2 on January 27, 1997, ISSC will submit to the CWS/CMS Project Director a report or set of reports assessing ISSC's performance against the performance standards during the previous calendar month. This report or set of reports will be due by the fifteenth business day of each month. The first set of reports will be produced after the first full month in ADR/TSS Release 2 (March 1997).

14.3. Other ISSC Activity

Other Activity	Time Frame
Backup the CWS/CMS Database	Weekly
Maintain the Application and System Software	On-going

Table 20: Other ISSC Activity

ISSC will provide appropriate security practices over physical and information assets during on-going support of the CWS/CMS project. (This security requirement is in Boulder; State Counties must provide this service at each location.)

ISSC also will be responsible for investigating and correcting failures to meet Performance Standards by:

1. Initiating problem reports to identify root causes of failures;
2. Reporting all problems to the CWS/CMS Project Director that could be expected to have a material adverse effect on the State operations; and
3. Making written recommendations to the CWS/CMS Project Director for improvement in procedures.

NOTE: All reports in Table 19 (ISSC Report Frequency, p. 2-2) derived from Rider H of the contract will be developed and approved during the Field Test and Pilot reporting periods.

14.4. [13]Co-Existent Network Protocol/Workstation Constraints

- Network Protocol

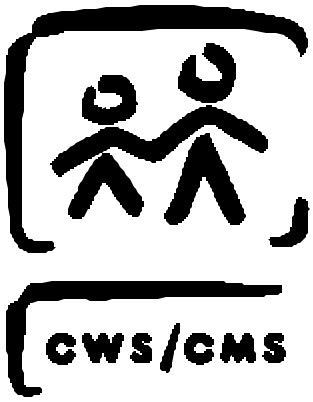
  The application must be able to work in conjunction with SNA, NETBIOS, TCP/IP, NETWARE, and WindowsNT.

- Workstation Constraints

  (Currently being reviewed at the TRG meetings and establishing guides)

[13] Issue - Open - Can the SLA define expectations of network usage? The application must work in conjunction with TCP/IP, Netware, and WindowsNT. This section was added for this issue with Co-existent counties.

XV. Co-Existent Counties Attachments



15. Co-Existent Counties Attachments

15.1. ISSC Support Services

In general, ISSC responsibilities include the following services:

- System Management Controls

  ISSC will be responsible for documenting and executing System Management Processes and Controls for each of the following disciplines:

  - Problem/Recovery Management D51E
  - Change Management D51D
  - Configuration Management
  - Capacity Management D51G
  - Performance Management D51F
  - Batch Management
  - On-Line Management (ISSC Help Desk) D51C

- Application Production Support

ISSC will support all aspects of the CWS/CMS application. This includes support for coding, testing, training, user documentation, and procedures for the ISSC Help Desk and third-party software (templates) associated with the application.

The CWS/CMS application Release 1 and 2 code fixes are subject to interpretation. All fixes must be assessed to determine if the fix should be considered a problem or enhancement to the code. This interpretation is mutually agreed to by the state and ISSC Executive Management or the assigned committee.

- Operational Procedures and Standards

  ISSC will document its standards and procedures in paper and electronic formats.

- Computer Operations

  ISSC will provide computer operations support for the development, testing, training, and production environments. The operational support will be provided both in the Boulder facility as well as the remote facility in Sacramento. Computer operations include monitoring of system consoles, tape operations (including tape library and tape mounts), and development of automated operations.

- Systems Programming Support

  ISSC will provide installation, maintenance, customization, and support of all the systems software required by the application that are listed in the contract.

- Data Storage Management

  ISSC will be responsible for Data Storage Management. ISSC will work with the state to define the scope of this service. In general, the service will include the use of Systems Managed Storage (SMS) to ensure only recently-used data is resident on disk drives.

- Production Migration

  ISSC will be responsible for establishing a migration process for the application from the development to the testing, training, and production environments. Migration of newer versions of these applications will be controlled by the change management business process (D51D) and a migration tool.

- Database Management and Administration

ISSC will be responsible for the physical placement of databases, performance, and tuning. ISSC will be responsible for physical database administration for the development, testing, training, and production environments.

- Security Management

  ISSC is responsible for the physical and logical security for the development, testing, training, and production environments.

- [14]MACs (Moves, Adds, and Changes to hardware)

  The Move, Add, and Change process will be documented by ISSC and include moving an environment. The environment move will be outside of the current domain and be broken down by the number of devices moving or changing. For example, 0 - 15, 15 - 25, 25 - 75, and 75 - 150, 150+ will be used.

15.2. Service Level Meeting

A formal SLA management group consisting of representatives from both ISSC and the State of California will be established to monitor and manage the performance defined under this SLA. This group will meet on a monthly basis to review the Service Level Attainment Report.

15.3. Security Standards for Local Area Networks

While the information content of servers is owned by the State of California CWS/CMS Project, management ownership of the servers remains with ISSC. Under ISSC Security Standards document ITCS201, ISSC needs to maintain security on management LAN servers owned by ISSC. Under the following exception titles, the State/County LAN Administrator will have certain responsibilities.

If the following security standards (Sections 15.3.1 through 15.3.7) are not in place and this is determined to be the cause of an availability problem with an ISSC LAN server, ISSC is not liable for liquid damages caused by the loss of server.

15.3.1. Physical Access Controls - State/County LAN Administrator

ISSC is responsible to deliver availability for the servers. Since physical access to information processing exposes the project to risks that could effect availability, the count and administration management must institute controls to interdict physical access that are commensurate with the risk and possible loss of availability to the server. Controlled access to server closets include:

- Area owner needs to be clearly identified
- Area to be locked, even when attended
- Access to the area is restricted to only those authorized by the area owner
- Access to the area is only allowed from internal space; emergency exit doors should be alarmed
- Exterior windows should not be permitted in ground-floor installations
- Access to the area is controlled by electronically-controlled access unless specifically exempted by the area owner's director or equivalent level executive.

15.3.2. Storage Media - State/County LAN Administrator

The state and counties own the controls of storage media for backups. Storage media includes magnetic tape and removable and non-removable optical for magnetic disks and cartridges.

In LAN environments, data is typically created, accessed, and stored on magnetic disks on LAN workstations and servers. This data generally remains on-line and is not placed on removable media (other than for backup purposes) or routinely mounted/dismounted for business processing.

[14] Issue - Open - MAC's - Time frame commitment (Turn around and Response). This section is currently being developed by the State and ISSC.

A storage-media custodian is an individual who has accepted the responsibility for storage of removable media on behalf of other people. Unlike media used for normal system/data backup purposes, media placed in custodial care must be accounted for. All movement and control of media in the custodian's storage media library must be logged.

15.3.3. LAN Connected Printers - State/County LAN Administrator

All hardware for LAN connected printers and plotters (adding paper, clearing jams, and so on) fall under the responsibility of the State/County LAN administrator. The control of print output is the responsibility of the end user who should use the facilities provided and abide by the printer owner's rules. ISSC owns the software piece for the converted printers. ISSC is responsible for network printer operations.

15.3.4. Logical Access Controls - State/County LAN Administrator

Certain logical access for county servers should be under the control of the counties. Logical access controls that fall under county responsibility include the following primary topics:

- Define and Protect Resources - Ensure that each resource on the system can be identified, access to the resource can be allowed at the appropriate levels for authorized users, and access is denied for unauthorized users.
- System and Security Administration - Ensure that only authorized users can set, modify, or disable system security functions.

15.3.5. Security Architecture County Responsibilities - State/County LAN Administrator

In both a co-existent LAN and dedicated environment, the county is fully responsible for security maintenance and administration. The ISSC CWS/CMS Help Desk is always responsible for the software security of the CWS/CMS server.

15.3.6. Logon to County LAN - State/County LAN Administrator

The IBM LAN Server Program on the CWS/CMS server will create a security audit log entry for each invalid logon attempt. This log will contain two major classifications of failed attempts:

- Invalid UserID; recorded by time-stamp and workstation ID only.
- Valid UserID but invalid password; recorded by UserID, time-stamp, and workstation ID.

The log will be copied once a day to a read-only file available to the state, county, or office security administrator. It will be the responsibility of the state, county, or office security administrator to determine if these log entries indicate a breach or attempted breach in security. It will be the responsibility of the state, county, or office security administrator to take any actions deemed necessary as a result of this determination.

15.3.7. UserID and Password Maintenance - State/County LAN Administrator

The state, county, or office security administrator is responsible for creating and maintaining UserIDs and passwords. The ISSC CWS/CMS Help Desk will assist with user's server and host password synchronization when requested.

15.3.8. [15]Confidentiality Data Standards

All ISSC employees will be made aware of California State Requirement of Section 10850 of Welfare and Institutions Code by...

15.4. External Interfaces

This section will be used to explain the external interfaces that ISSC needs to provide and is based on the SRD sections L.06, L.07a, L.07c, and L.07d. The key aspect of this section will be to emphasize the importance of HWDC's role in attaining control over the nightly batch runs. If inputs are not received from HWDC on a timely basis, the output via batch to the county servers will be in jeopardy.

15.5. External Interfaces Release One

ISSC in Boulder requires a connection to HWDC for MEDS external interface. The connection is used by the CWS/CMS application for file clearance. The connection is an ISC (Inter System Communication) connection between the MEDS CICS system and the CWS/CMS CICS system. MEDS is available from 5:30 AM to 12:00 PM Monday through Friday and 5:30 AM to 10:00 PM Saturday and Sunday. The file clearance data will be collected

[15] Issue - Open - Can SLA establish confidentiality standards? All ISSC this section is currently being reviewed by ISSC

when MEDS is available and the host production CICS is available. Under Release 1, CICS will be available 24 hours per day pending the scheduled maintenance and maintenance window time frame of Sunday from 3 AM to 10 AM, PT.